

LONG ISLAND BOTANICAL SOCIETY

Vol. 11, No.1

The Quarterly Newsletter

Jan.- Mar. 2001

Preliminary Atlas of the Fagaceae of Long Island, New York

The Flora Committee
Long Island Botanical Society

This is the seventh contribution, in as many years, to an atlas of the flora of Long Island. It treats a single family, the Fagaceae, comprising twenty-six taxa, of which twenty-two are full species and four are named hybrids. Sixteen of the species are native and six are alien.

The Fagaceae, or Beech family, consists entirely of woody plants having in common a feature of the inflorescence called a cupule. The cupule is represented by the "cap" of the acorn in the case of the oaks (*Quercus*), or the "bur" of the chestnuts (*Castanea*) and beeches (*Fagus*). The female flowers are primarily wind-pollinated, therefore the accessory floral parts are much reduced or absent. The male flowers are aggregated into catkins or, in the beeches, pedunculate heads.

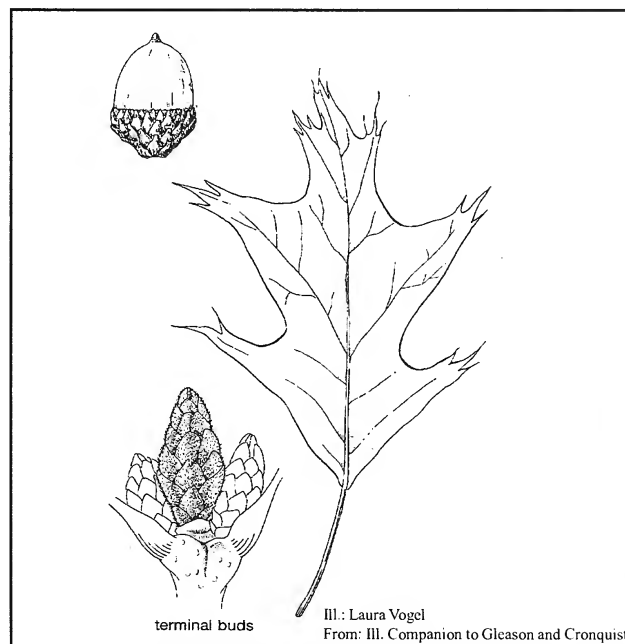
The oaks are prone to hybridization, often making identification difficult. In addition to the four hybrids mapped here, about 30 other known hybrid combinations could theoretically occur among Long Island's oak species, and some of these have undoubtedly gone unrecognized locally.

The Fagaceae are of economic importance in the use of their wood for lumber and other purposes such as horticulture. However, on Long Island, at least from the perspective of LIBS, the significance of this plant family is more vegetational. Few mature local upland forest or woodland types are without one or more oaks as dominant elements. In addition, some oak-dominated communities, such as the dwarf pine plains of

Westhampton and the oak-brush plains of central Long Island are of global rarity. The "Grandifolia Sandhills" at Friar's Head, recently of great conservation concern, takes its name from American beech (*Fagus grandifolia*), whose unusual growth form at this site drew attention to this fascinating and rare natural community type. Stands of beech of more typical growth habit may be found especially on the moraines of the north shore.

Until the early 1900's, the American chestnut (*Castanea dentata*) probably rivaled many oak species both in its economic value and for its importance as a forest element in western Long Island and on the north shore moraines. The chestnut blight has since crippled the species and specimens are now only found locally as resprouts from infected trees. These rarely reach reproductive maturity before dying back themselves. Stock from Long Island and elsewhere is being used in research to develop a blight-resistant form.

(See Atlases on pages 6-9) - Skip Blanchard



Black Oak (*Quercus velutina*)

Long Island Botanical Society

Founded: 1986 Incorporated: 1989

The Long Island Botanical Society is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild on Long Island, New York.

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Society News

Forest Fallout: The last remaining unprotected forested area in Stony Brook has been dealt a heavy blow. The Coalition for the Future of Stony Brook Village successfully secured a major portion for protection as a County Park. But on November 27th, the Brookhaven Planning Board approved a proposal for the expansion of the Stony Brook Post Office and the Cultural Center which will undermine and remove the downsloped western portion of the forest. Those wishing to help or contribute towards the legal effort to prevent the further loss of this north shore forest may donate to: Coalition FSBV, P.O. Box 333, Stony Brook, NY 11790 or call (631) 751-7549.

Quad Confiscation: In October, the Suffolk County Park Police, along with three other law enforcement agencies, launched a surprise sweep for all-terrain vehicles operating illegally on public lands in Manorville, Ridge and Yaphank. More than 40 ATV's were impounded and nearly 50 summonses were written. ATV use has become a nagging problem in the east end areas of the pine barrens.

Grandifolia Geology: Steven Englebright presented "On the Origin of Parabolic Dunes Near Friar's Head, Long Island, NY" to the "Long Island Geologists" forum in December. The paper that outlined a new theory on the Grandifolia Sandhills had its first publishing in the Long Island Botanical Society newsletter (Vol.10, No.1).

Tributary Tribute: Middle Run Stream in Locust Valley received due attention in September when Nassau County Legislator Muellers announced it had been added to the New York State Open Space priority list. The stream, still unpurchased, leads to Shu Swamp.

The Hauppauge Springs: The headwaters of the Nissequogue River are for sale. The private owners of the properties that constitute springs that feed the Nissequogue River are taking offers from developers. One of the parcels is already in contract. The area sits south of Blydenburgh County Park on the south side of Veterans Memorial Highway. Native America has taken the lead on mediating a dialogue between the owners and the town, county and state governments to secure this area for protection as a preserve. LIBS endorsed this effort at its last executive board meeting. Anyone with ecological or historical knowledge of this site may forward it to: LIBS@nativeamerica.org.

News of the Future

December 22, 2217: Breaking the silence of the crowded auditorium, the New York Natural Heritage Program disclosed its long awaited decision. Oriental bittersweet, which has now completely displaced the indigenous woody plant flora of the downstate area, was finally declared a native plant. Plant restorationists everywhere breathed a sigh a relief as they no longer have to remove this plant from habitats. Now all can relax and enjoy this pretty vine with its colorful fall orange berries that is no longer designated an invasive.

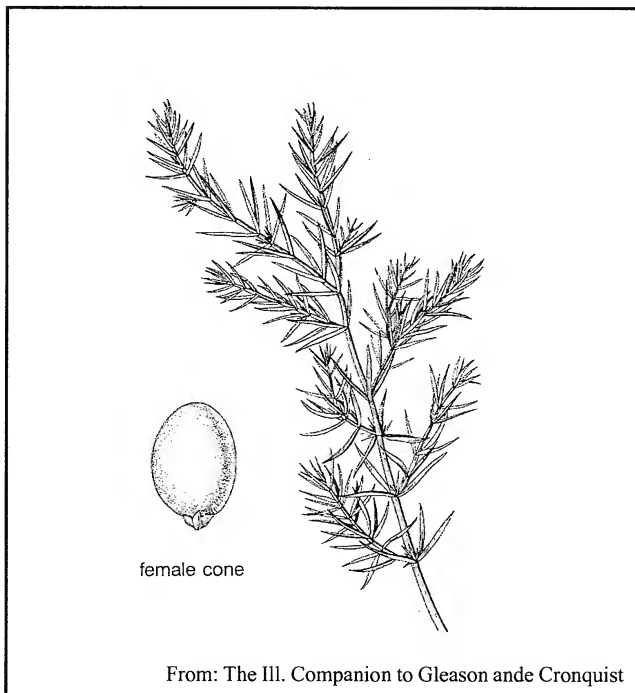
Requests to the Editor

John Silba of SUNY Farmingdale is collecting information on locally occurring species of Common Juniper (*Juniperus communis*) and Ground Juniper (*Juniperus communis* var. *depressa*). Common juniper is an erect shrub or small tree. Ground juniper is a prostrate form that lies along the ground. John is collecting berry specimens of the gymnosperms for the herbarium at the New York Botanical Garden in the Bronx. He recently found both the upright form and the prostrate form at Cathedral Pines in Middle Island. He also found specimens in Bay Shore.

If you have any information as to the location of these species please contact him at:

John Silba: (631) 420-2113

John Silba
Department of Horticulture
Thompson Hall
SUNY Farmingdale, New York 11735



Common Juniper (*Juniper communis*)

Plant Sightings

Teasel: Zu Proly reported that she had found Teasel (*Dipsacus sylvestris*) at Alley Pond Educational Center recently. No one else has reported seeing Teasel on Long Island.

Seabeach Amaranth: Eric Lamont said that in talking to Steve Young he learned that the Seabeach Amaranth (*Amaranthus pumilus*) population was estimated at over 150,000 plants on Long Island this year. It was also found on the New Jersey coast and on Assateague Island. It had a very good year.

Silvery Aster: Eric cited that the only population of Silvery Aster (*Aster concolor*), which grows in Shinnecock Hills, has been lowered from 24 plants to 12 because of pole maintenance.

Curly Grass Fern: Eric reported that he and Steve Young also found that Curly Grass Fern (*Schizaea pusilla*) was doing very well in Napeague. (Curly grass fern is the logo for LIBS.)

Wolffia: Skip Blanchard reported that he and Rich Kelly found *Wolffia brasiliensis* in the south end of Massapequa Lake in Massapequa Preserve.

Small-leaved White Snakeroot: In mid-September Skip Blanchard found Small-leaved White Snakeroot (*Eupatorium aromaticum*) at the south end of Long Pond. This is a Natural Heritage listed plant.

White Fringed Orchid: Five years ago Gigi Spates of the Quogue Wildlife Refuge invited Eric Lamont and some students to cut back vegetation in a bog overrun by blueberry and Pitch Pine. This year over sixty White Fringed Orchids (*Platanthera blephariglottis*) bloomed in this area.

American Chestnut: Norman Soule located a large American Chestnut tree in Manorville that was full of chestnuts. This is the only known tree on Long Island that is still bearing nuts on its own. Nuts were collected by Norman and John Potente.

Another Long Island Orchid Rediscovered

**Skip Blanchard &
Bob McGrath**

In the last two or three years the LIBS newsletter has documented the rediscovery of two Long Island orchids that had not been seen for over sixty-five years--the Spotted Coralroot (*Corallorhiza maculata*) and the Northern Tubercled Orchid (*Platanthera flava* var. *herbiola*). Now, a chance discovery in Hubbard County Park on November 4th, 2000 has added a third long-lost orchid, the Autumn Coralroot (*Corallorhiza odontorhiza*).

On that Saturday, Jane and Skip Blanchard were in Flanders in Suffolk County to redocument a population of Seabeach Knotweed (*Polygonum glaucum*) for the Natural Heritage Program. As they were walking from Red Creek Road to the shore via an unpaved road they spotted a single fruiting shoot, and then several, of what was obviously coralroot species, but too small to be the Spotted Coralroot. Further searching showed it to be numerous on both sides of the road and a cursory count yielded over 200 plants. (Later independent counts by Eric Lamont and then by Barbara Conolly and Betty Lotowycz have placed the number at closer to 400.)

The Blanchards hurried on to the beach and finished their knotweed search (finding none, incidentally), and as they were walking back they ran across Bob McGrath, who was going in the opposite direction with a group of science teachers. (They were finishing a course on Long Island natural history that Bob teaches.) Bob, one of the founders of the Long Island Pine Barrens Society, is coauthor with John Turner of a 1985 paper entitled "Some Orchids of the Long Island Pine Barrens." (Talk about lucky coincidences.) He had missed the plant on the way in, but he said that he knew of no extant or recent populations of autumn coralroot. *But*, he also added, he too had seen a fruiting Autumn Coralroot only hours earlier on the road leading to Owl Pond, which is only about 1.3 miles away from the Hubbard Park site.

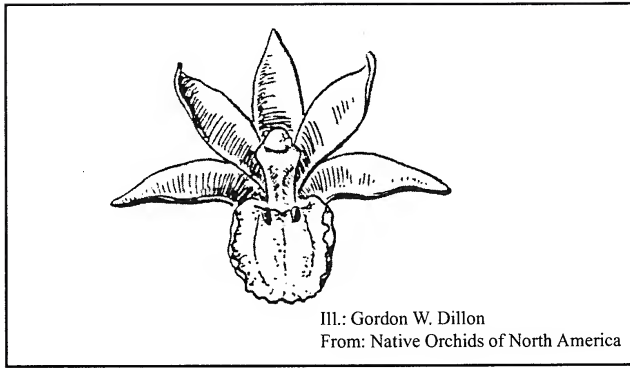
The Autumn Coralroot is known historically from Brooklyn, Queens and the towns of Hempstead, Babylon and Riverhead (see Lamont, *Torreyia* 123: 160. 1996). It was last documented by Roy Latham from Manorville on August 30, 1932. The present population, then, is not only the first to be reported on Long Island in 68 years, but also the easternmost by some 15 miles.

The plants are mostly from four to ten inches tall, and were it not for their numbers, they would not be particularly noticeable. Most of the flowers remain more or less closed and are apparently self-pollinated, although open flowers and open pollination are reported in some Canadian populations. Seed capsules form rapidly from pollinated flowers and are the most conspicuous feature of the plants.

The big question, of course, is how a population of 400 orchids on the edge of a road in a county park could go undiscovered until now if it had "always" been there. One answer may be that this is a late-season, woodland plant. Local botanists, to the extent that they are active in September, are looking mostly in fields and other open areas and not where *Corallorhiza* grows.

A second possible explanation is that most of the plants stay underground most of the time. How do they do this? All orchids require invasion by so-called "mycorrhizal" fungi in order to pass through a critical stage in their growth from seed. The fungus provides the tiny new plants with needed nutrients as they grow large enough to become photosynthetic and self-sustaining. But, some orchids, including the coralroots, have come to continue their association with the fungus throughout their lives and have thus become nearly completely reliant on the fungal partner for sustenance. Such plants lack leaves and are purple, pink or yellow due to the near absence of chlorophyll.

As a result of having abandoned their reliance on the sun, populations in this genus commonly show wide fluctuations in their above-ground numbers. In fact, during most years, most of them lie undetected under the ground as perennial rhizomes nourished by a fungus, only bloom in mass numbers in especially favorable years.

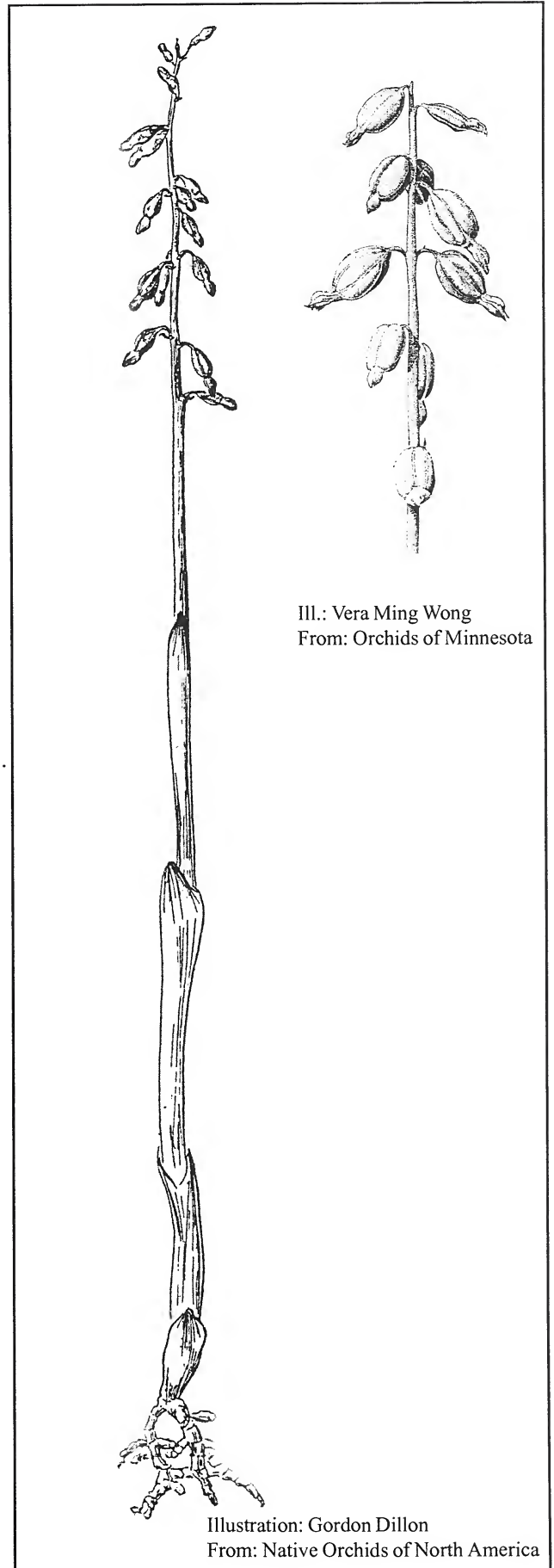


Autumn Coralroot Flower (*Corallorhiza odontorhiza*)

All of this also sheds some light (so to speak) on why the plants have it “made in the shade”: they are nourished by fungi, not by photosynthesis. What does it matter that they live and flower in late summer, shady woods?

What is a “favorable year” for these plants? It is hard to say, but this year is the first time known to us in which *no* plants have come up at all in Long Island’s only known but large population of Crane-fly Orchids (*Tipularia discolor*). The two orchid events are diametrically opposite but equally dramatic. Maybe something in the pattern of temperature or rainfall or both in the last year or two was the factor that spoke loudly to two orchids having different adaptive strategies. Additional support for the favorable year idea comes from a report by Karl Anderson, a seasoned New Jersey naturalist. He had never seen the Autumn Coralroot in his state until this year, when he found it at White Lake, Warren County in north-western New Jersey this past September 23rd.

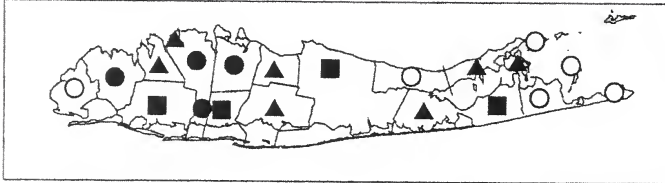
There is another possibility. Both the Hubbard County Park and Owl Pond plants seemed to be confined to road edges. Could it be that some disturbance such as road grading stirred the plants into a reproductive mode? Is it even possible that fill-dirt that happened to be rich in orchid seeds or rhizomes was imported from elsewhere to improve the road surfaces? The authors concur that while this seems plausible for the large Hubbard’s population, it is unlikely for the Owl Pond plant in that it was growing along a seemingly undisturbed roadside (the road in question, Spinney Road, has been closed and gated off for at least ten years). Whatever the answer, a lot of local botanists will be awaiting the next autumn season to see this rare and interesting plants. Or not.



Autumn Coralroot (*Corallorhiza odontorhiza*)

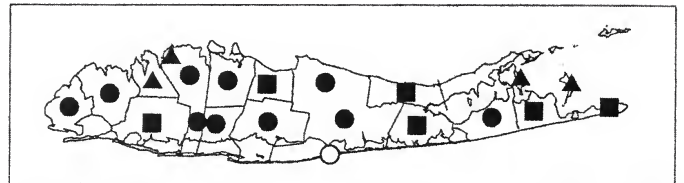
Maps

FAGACEAE



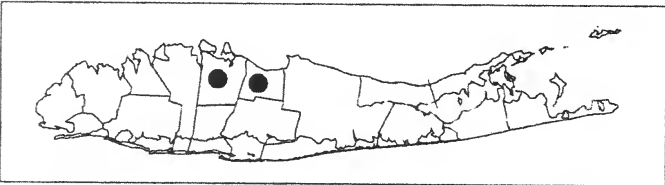
Castanea dentata
Native

American Chestnut



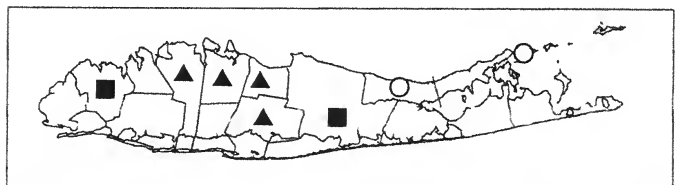
Quercus alba
Native

White Oak



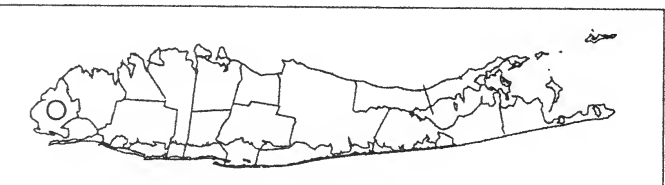
Castanea pumila
Alien

Chinquapin



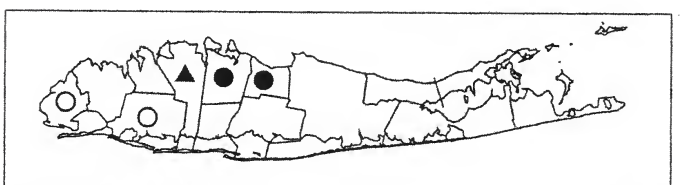
Quercus bicolor
Native

Swamp White Oak



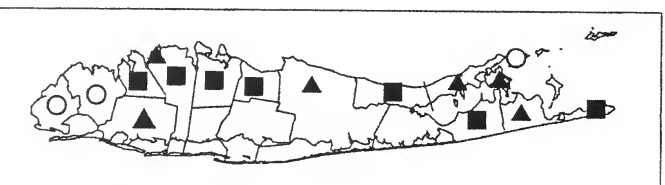
Castanea sativa
Alien

Spanish Chestnut



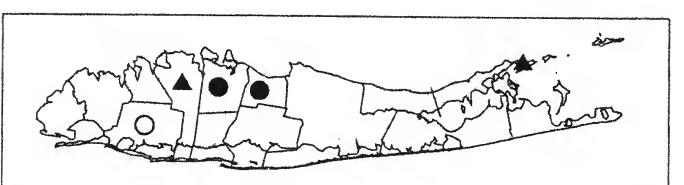
Quercus x brittonii
Q. ilicifolia x marylandica
Native

Oak



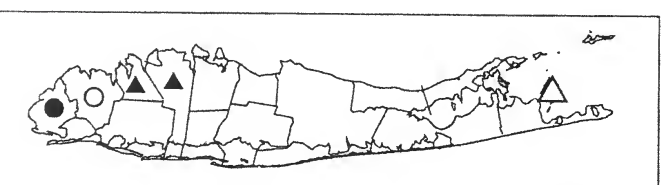
Fagus grandifolia
Native

American Beech



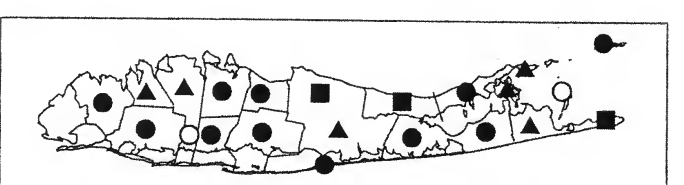
Quercus x bushii
Q. marilandica x velutina
Native

Oak



Fagus sylvatica
Alien

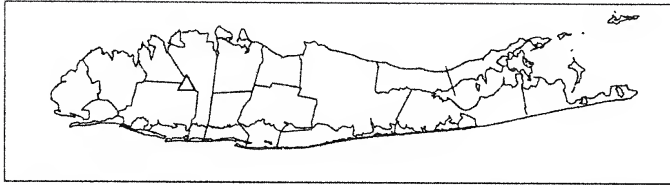
European Beech



Quercus coccinea
Native

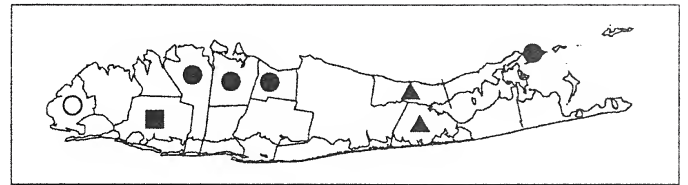
Scarlet Oak

Maps



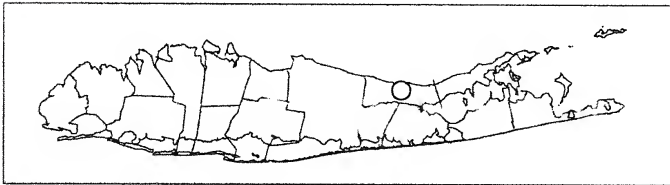
Quercus falcata
Native

Southern Red Oak



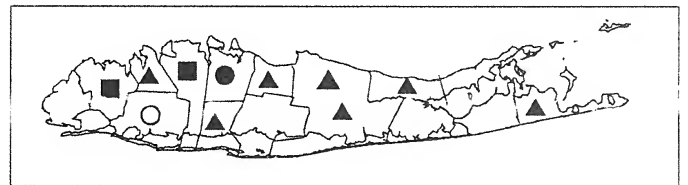
Quercus marilandica
Native

Blackjack Oak



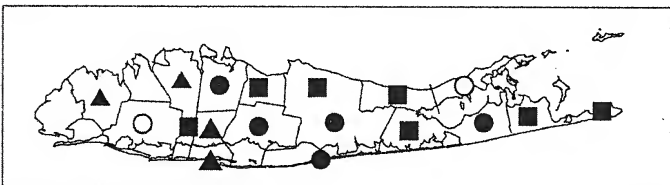
Quercus x faxonii
Q. alba x prinoides
Native

Oak



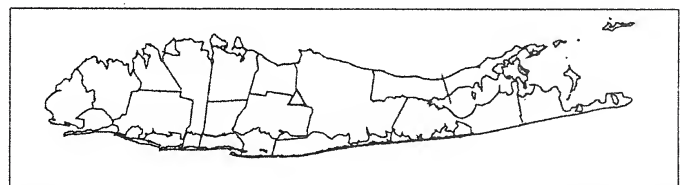
Quercus montana
Native

Chestnut Oak



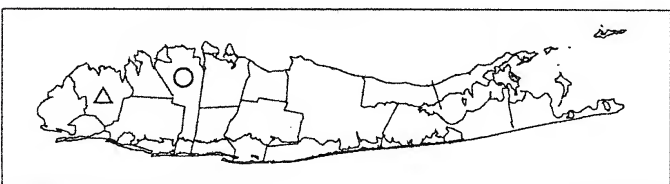
Quercus ilicifolia
Native

Scrub Oak



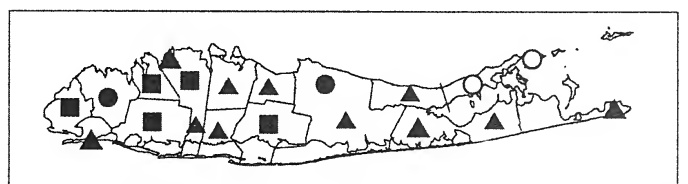
Quercus muhlenbergii
Native

Chinquapin Oak



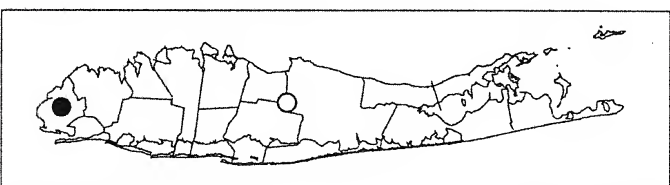
Quercus imbricaria
Alien

Shingle Oak



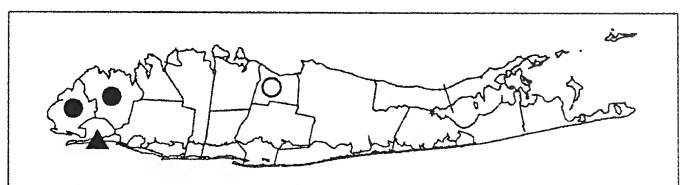
Quercus palustris
Native

Pin Oak



Quercus macrocarpa
Native

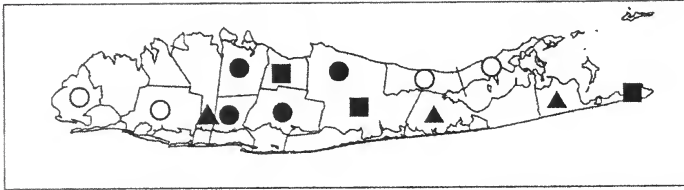
Mossy-cup Oak



Quercus phellos
Native

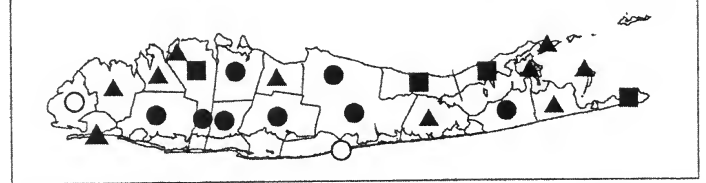
Willow Oak

Maps



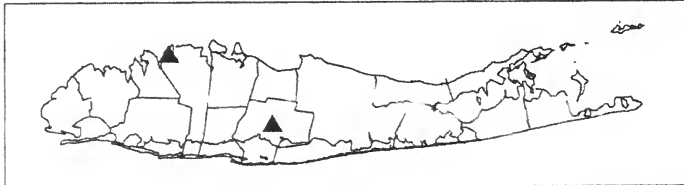
Quercus prinoides
Native

Dwarf Chestnut Oak



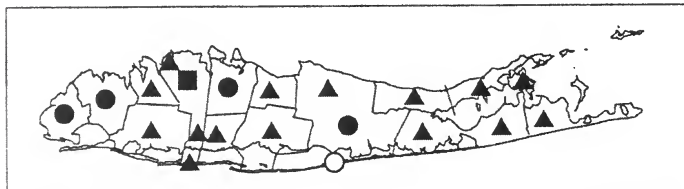
Quercus velutina
Native

Black Oak



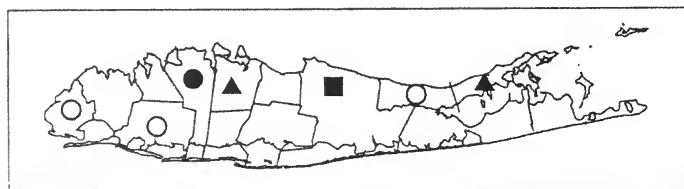
Quercus robur
Alien

English Oak



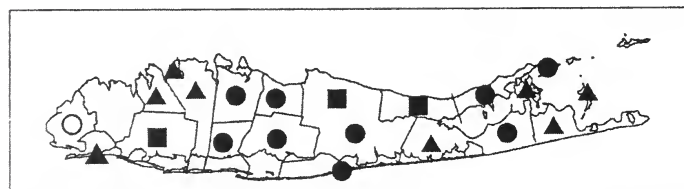
Quercus rubra
Native

Red Oak



Quercus x saulin
Q. alba x montana
Native

Oak



Quercus stellata
Native

Post Oak

Key to Symbols

Several symbols were used to indicate different types of data. These symbols were placed in a county or town. In places where we felt that more detail was warranted the symbols were placed in portions of towns (such as Fishers Island, Gardiners Island, Montauk Pt, E & W Southampton, N & S Brookhaven, etc.). Open symbols were used to indicate that the species was only known from before 1980, closed symbols were used to indicate that the species is known from after 1980. Circles were used to indicate a specimen was seen, triangles to indicate a report is known and a square to indicate that an old specimen is known and a recent report is known.

open symbols

(no data since 1980)

○ - a specimen is known from the county, town, etc.

△ - a report is known from the county, town, etc.

closed symbols

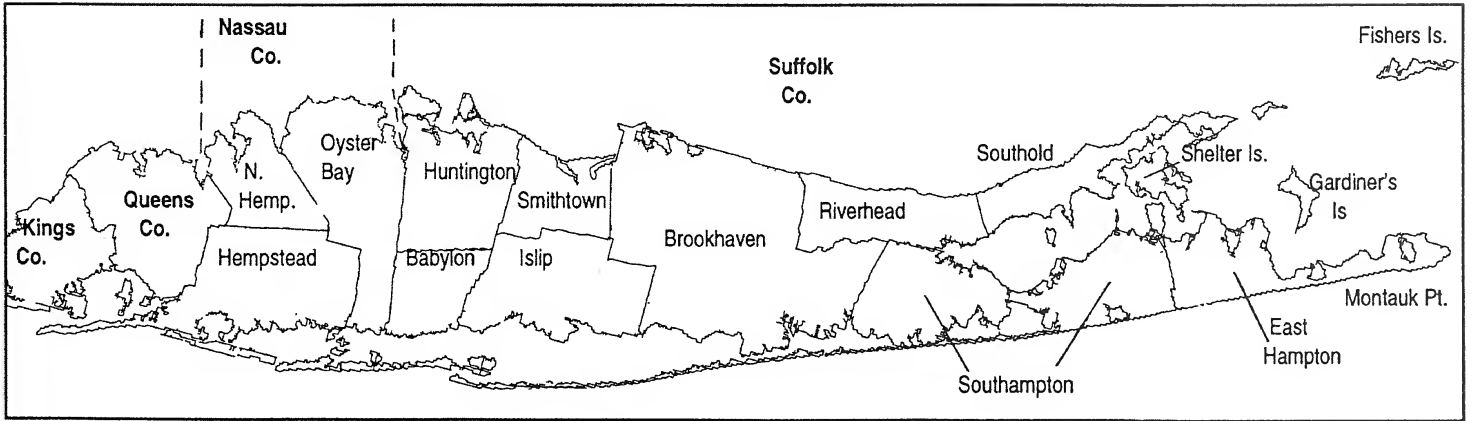
(data since 1980)

● - a specimen is known from the town

▲ - a report is known from the town

■ - a pre-1980 specimen is known and a post-1980 report is known from the town

Map of the counties, towns and other regions of Long Island



The Preliminary Atlas

The preliminary atlas is an initial compilation and publication of the plants of Long Island. It is the most ambitious, cooperative effort, thus far, to gather information and document the locations of plant species within the townships of the island.

Some species have been observed throughout Long Island history, some are newly discovered and others are only noted historically.

You can help the flora committee by sending your observations to either:

Steve Clemants: (718) 941-4044 or

Skip Blanchard: (631) 421-5619



Norman Soule looks over an American Chestnut tree (*Castanea dentata*) that he came across in Manorville this year. The burs at the top of the tree are bearing ripe American Chestnuts.

Trees

William Mulvihill

Dead trees, dying trees, those ugly lichen-spotted boles of decaying trees. I love them. Add old trees that take up more than their proper share in a forest, storm-damaged trees and especially those that are barkless and riddled with holes. Ecologically, these ugly ones are more important than the trees we've been conditioned to love: those well-tended trees in our front yard, those beautiful arboretum specimens, those curbside trees. I love them, too, but I prefer the wounded and stricken trees, ignored and unseen that one comes upon in the swamps and in the ever-dwindling forests of the South Fork.

A beautiful shaped lawn tree--an American beech, for example--is a sight to behold as are many of the well-tended shade trees along a thousand Main Streets. A wild tree, however, no matter how misshapen or riddled with decay or storm damage is important. Simply speaking, it's where the action is.

There's a tendency in our culture--maybe in all cultures--to tidy up the world, to drain a soggy marsh, to fill in a bog, to bulkhead the shoreline of a pond or coastline. This includes the urge to cut down old, craggy, misshapen, unbeautiful trees. But these ugly ones are invaluable because they are habitats. Their unsightly gaping cavities are homes for songbirds, squirrels, bees, owls, opossum, fox, every kind of reptile and a host of insect species.

Let's call most of them cavity trees for they contain holes, cracks and crevices which harbor wood-eating insects and afford homes for a very large number of living things which play a role in the web of life of which we are ultimately a part.

Trees die, fall and are reduced to humus. It may take a hundred years or twice that. A wound becomes soggy with rainwater; wood-eating insects come, each with a unique appetite. Woodpeckers arrive to eat the insects and thus enlarge the hole, inviting squirrels or opossum. Fungi penetrate the rotting areas. Bee scouts reconnoiter along with lizards, snakes, beetles and salamanders. Lichens flourish with unseen microor-

ganisms. Replete with hole, the tree decays supporting a growing number of living things. It becomes a home, a nursery, a roost, a refuge, a shelter.

A dead or dying tree, falling to the forest floor or within a swamp or bog, is only beginning another phase of its role in the grand design. It now becomes an even more diverse habitat. A woodpecker's nest becomes a chipmunk den. An abandoned beehive is a home for blacksnakes. Toadstools grow on it. A fox might burrow into the soft soil by the exposed roots. Toads and box turtles will find protection beneath the mossy bole where lichen, beetles and fungi are relentlessly destroying the fallen wood. The disintegrating log may last for a score of years.

Many bird species prefer to raise their young in cavity trees where, by feeding on insects, they keep those populations in check. In the dead of winter cavity trees provide life-sustaining shelter during bitter, sleet-driven nights which can take an awesome toll. Some birds have preferences that are survival factors. In Georgia, an endangered woodpecker prefers to nest in cavities of longleaf pines that are seventy feet tall.

Certain species become cavity trees earlier than others. Swamp maples and sycamores seem to develop more crevices, holes and cracks than hickory or sassafras. Locust and oak, especially white oak, do better than most. A white pine only gets interesting when it becomes a dead snag. Wild cherry, mulberry, ailanthus, abandoned apple trees and any trees drowned by the rising water of a pond or overwhelmed by disease play a part.

Concern about Lyme disease should encourage the preservation of cavity trees for they serve as habitats for owls and other carnivorous birds which feed on mice carrying the dreaded deer tick. To feed its young, an owl will catch dozens of mice each day.

Within an undisturbed forest, the cycle of germination, growth, maturity, decay and eventual demise runs its course. The cavity tree is part of the terminal sequence. Where no human hand intrudes, dead and dying trees remain, as nature intended, as habitats.

Highlights of Recent Field Trips

Barbara Conolly

Welwyn Preserve, Glen Cove Sept. 30

Eighteen people showed up for Lois Lindberg's well-organized field trip to her old stomping ground, Welwyn Preserve. It was a gorgeous day and the botanical highlights were as follows:

a surprising self-sown stand of Bladdernut (*Staphylea trifoliata*) near the burned-out tennis court, complete with some of the odd bladder-like fruits;

a good number of small specimens of Striped Maple (*Acer pensylvanicum*) and some seemingly hardy plants of Pawpaw (*Asimina triloba*);

a huge Yellow Birch (*Betula allegheniensis*) down in the damp valley surrounded by some of its offspring, and one or two River Birches (*Betula nigra*) down near the salt marsh;

a few plants of Bouncing Bet (*Saponaria officinalis*) near the beach still showed fresh blossoms. Also on the sandy edge there was some Mexican Seaside Goldenrod (*Solidago sempervirens* var. *mexicana*) along with the old familiar Seaside Goldenrod (*Solidago sempervirens*). Metric rulers came out to measure the small size of the blossoms and the involucre in the variety and photographs were taken to verify the lesser number of the petals as well;

a lusty plant of Seabeach Clotbur (*Xanthium strumarium*) was also at the beach and Skip identified *Spirodela polyrhiza* floating on the pond nearby. Did I mention that he also called out the rare *Euonymus inebriatus* in the woods?



Barbara Conolly

Mexican Seaside Goldenrod (*Solidago sempervirens* v. *mexicana*)

Programs

January 9, 2001* Tuesday, 7:30 PM

Russell L. Burke: Dr. Burke, a biologist at Hofstra University, will discuss the results of a four-year local investigation that he and students Brie-Anne McKernan and Christine Kutzman have been conducting, entitled: **"The Spread and Ecological Impacts of Introduced Weeds on the Hempstead Plains"**.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

February 13, 2001* Tuesday, 7:30 PM

Peter Warny: Peter Warny, research associate with the New York State Museum Biological Survey Lab will present a slide illustrated talk on **"Pine Barrens, Sandhills, Flatwoods, Pocosins, Fens, Oh My!"**. Vegetation communities, landscape habitats and restoration projects will be depicted along with comparisons of New York and New Jersey pine barrens and sandhills in Florida and the Carolinas.

Location: Earth and Space Science Center, State University New York at Stony Brook

March 13, 2001* Tuesday, 7:30 PM

Allan Lindberg: Allen Lindberg will reveal some of the successes he has been having removing unwanted trees and shrubs and controlling phragmites in a blockbuster presentation: **"Flagg Meadow Restoration"**.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

*Refreshments and informal talk begin at 7:30.

Formal meeting starts at 8:00 PM.

For directions call: 516-571-8500

New Members

Lyn Benson, Wantagh, NY

Tonia Leon, Huntington, NY

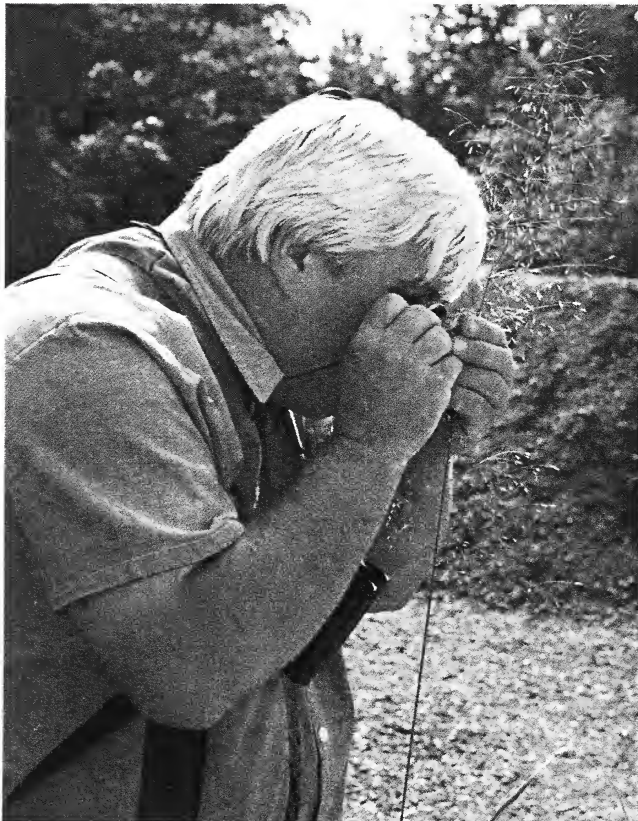
**Long Island Botanical Society
Muttontown Preserve
Muttontown Lane
East Norwich, New York 11732**

Lycopodium

"They are the elve's Christmas trees

Grandfather would say
of Ground Pine and Cedar
Once in the sun I laid on snow
eye level to see colored lights and bulbs
the size of frozen dew drops..."

-Maxwell Corydon Wheat, Jr.
From his new book: "Following Their Star:
Poems of Christmas and Nature"
(email: maxwell623@aol.com)



Skip Blanchard trains his eye on the grass *Sporobilitis asper* that was found growing at the Welwyn Preserve.

